2021 Spring Flood Outlook

Produced by Katie Landry-Guyton

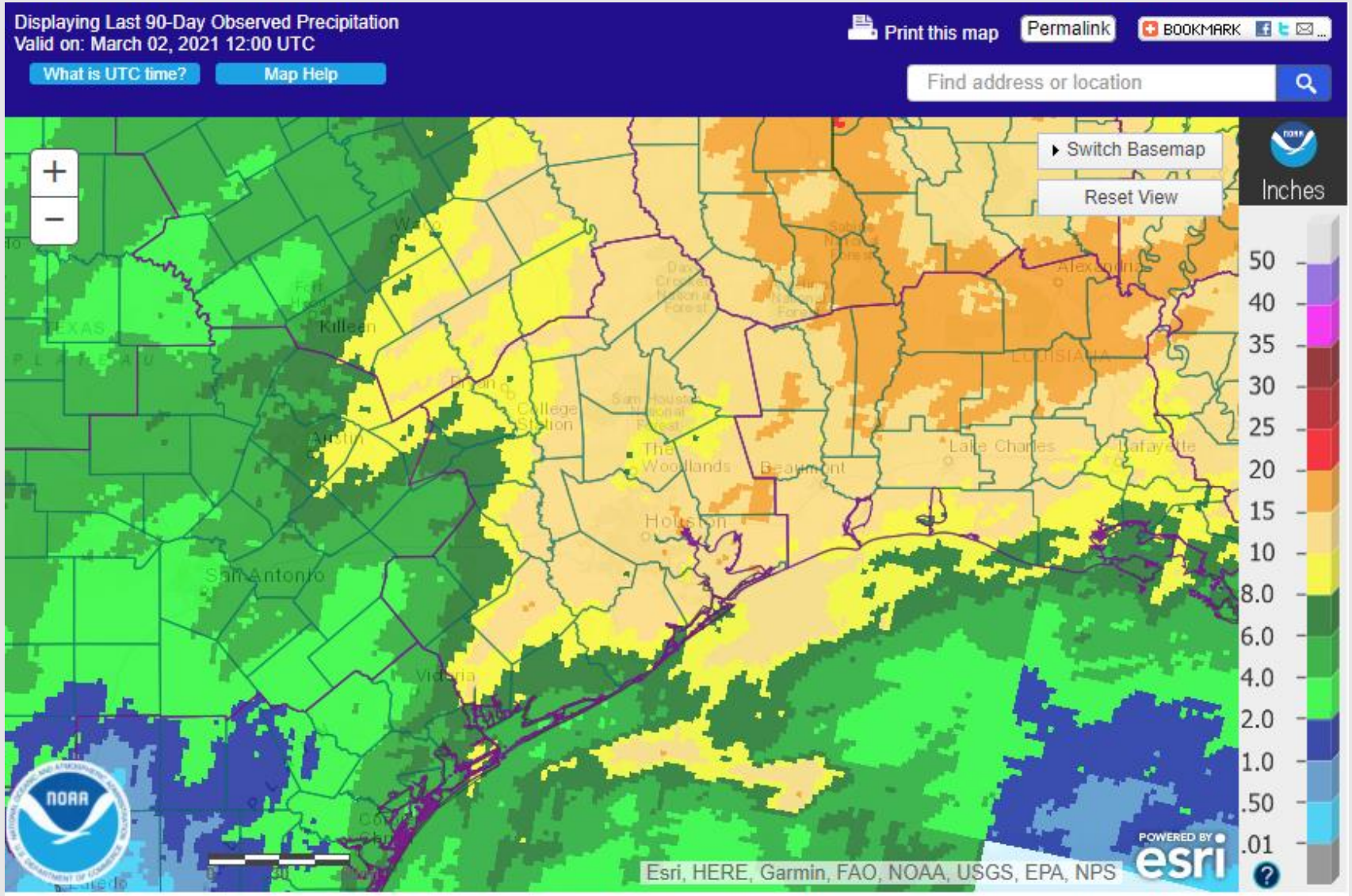
…Summary…

The Spring Flood Potential for southeast Texas is near normal for the Trinity, San Jacinto, Brazos, and San Bernard River Basins, and near normal to below normal for the Colorado and Lavaca/Navidad River Basins. This outlook is based on antecedent rainfall, current streamflows, water supply storage, soil moisture conditions, and long-term climate outlooks over the next three months.

90-Day Observed Precipitation

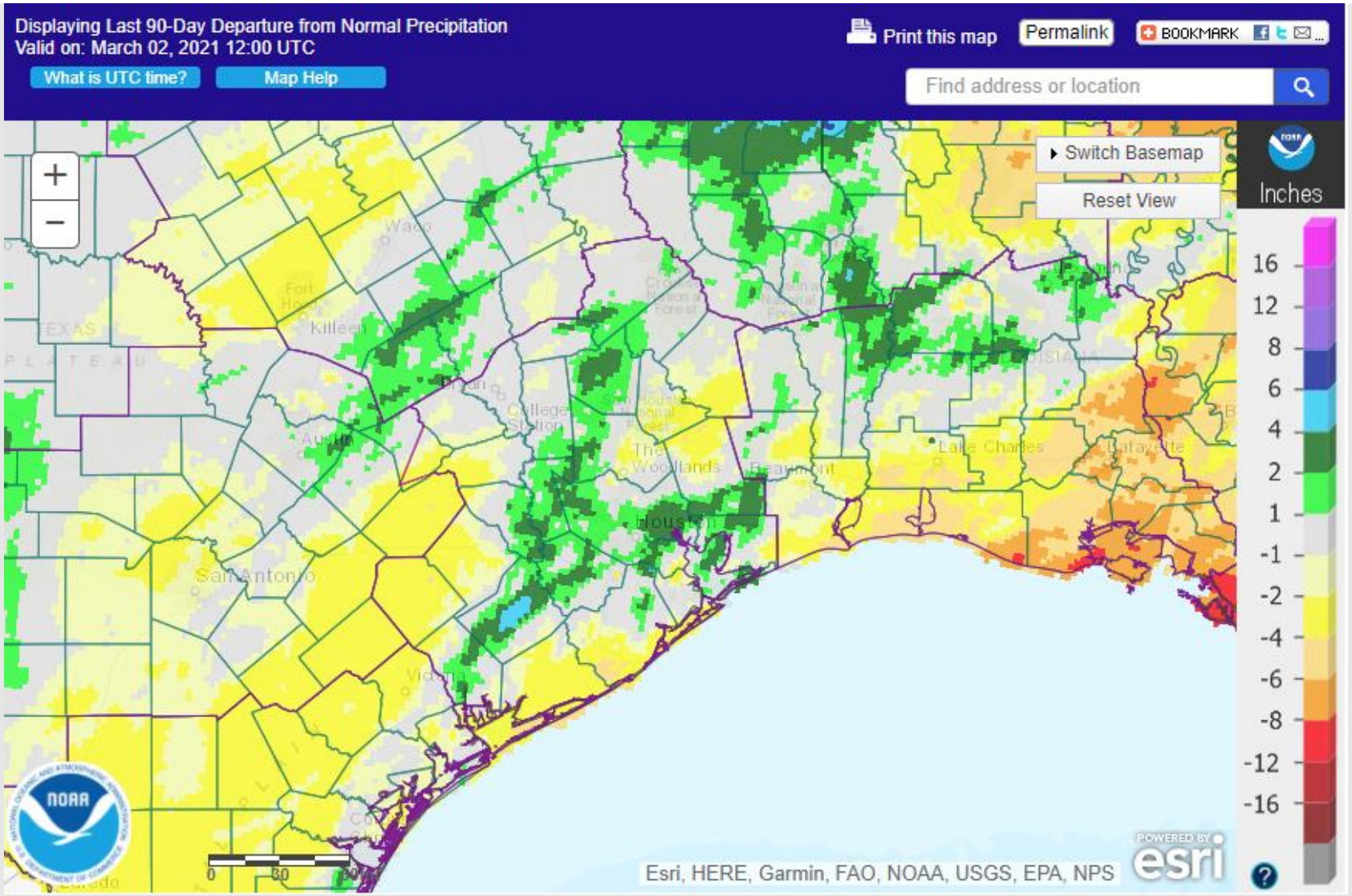
Over the past 90 days, the heaviest rainfall has stayed concentrated over the central and eastern portion of our county warning area (outlined in purple). Rainfall amounts in these areas range from 8 to 15+ inches which is near normal to slightly above normal.

Meanwhile, the western portion of our area has only seen 2 to 8 inches of rainfall, resulting in below normal precipitation and increasing drought conditions.



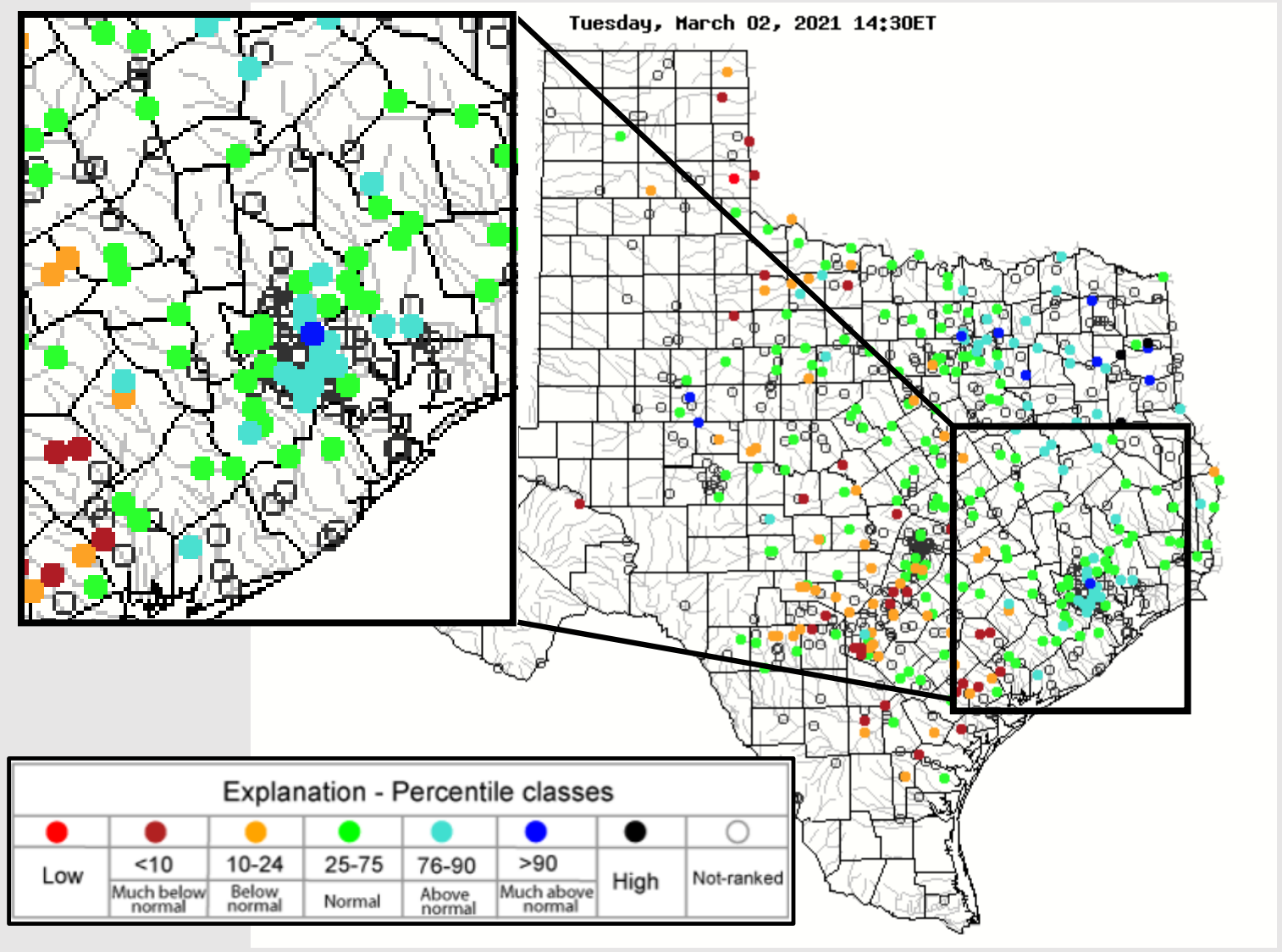
90-Day Departure from Normal Precipitation

Departures from normal ranged across the county warning area. The greatest deviations noted were -4 to -6 inches in southwest Brazoria County (50-75% below normal) and +4 to +6 inches (150-200% above normal) in central Wharton County.



Monthly Average Streamflows

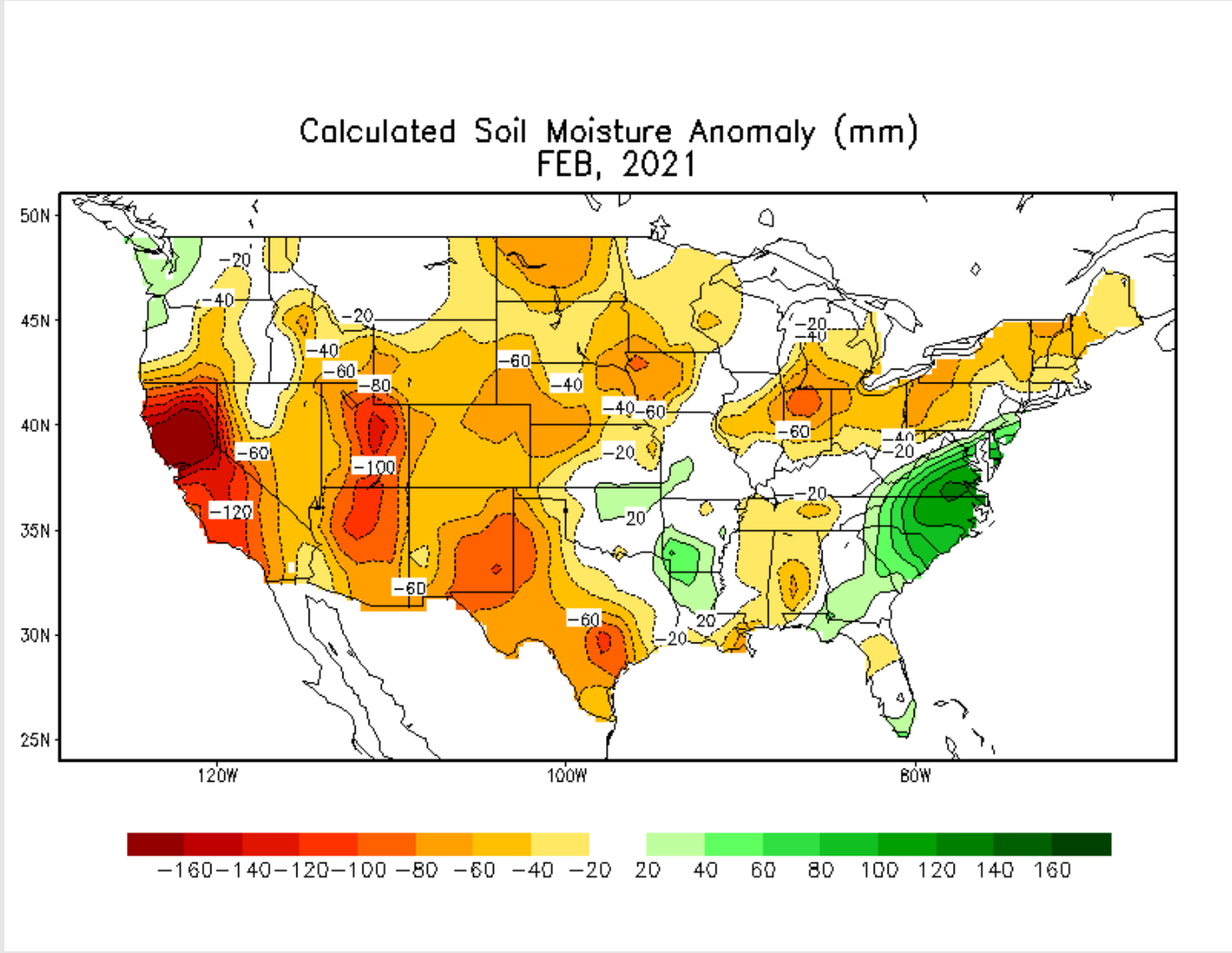
Average daily streamflows for the past 28 days have been running near normal to above normal for most of southeast Texas. The only deviations are much below normal streamflows on the Lavaca/Navidad River basin.



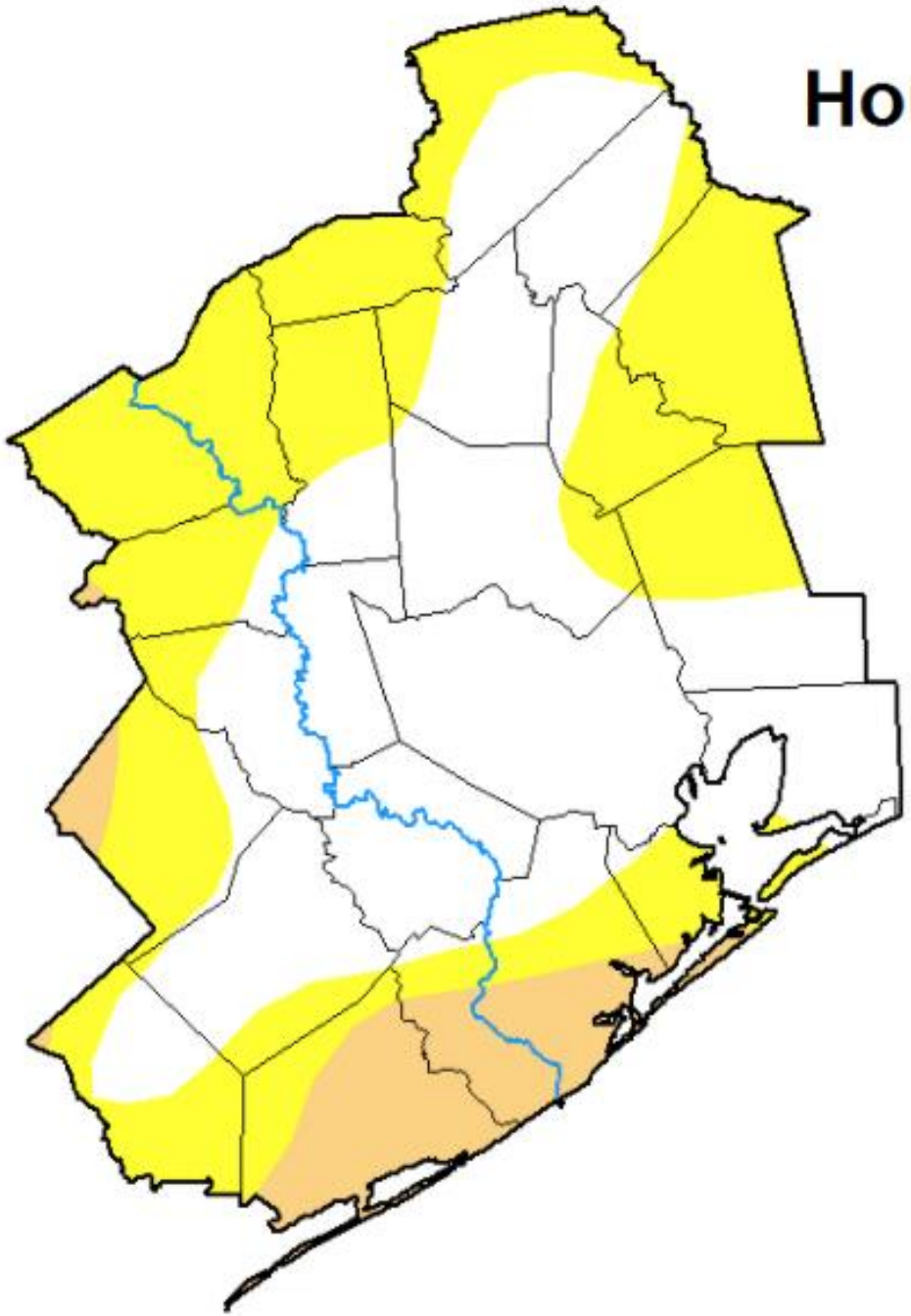
Soil Moisture

We are seeing slightly below normal soil moisture content over the western portion of our county warning area, as noted by the negative soil moisture anomalies (pictured right).

In addition, the below ground relative soil moisture values between 0 to 200 cm are ranging between 40 to 60% saturation across the majority of our area (meaning relatively normal but slightly dry); however, there are pockets of 60 to 70% saturation over Wharton and Fort Bend counties indicating relatively wet conditions.



Drought Monitor



U.S. Drought Monitor
Houston/Galveston, TX WFO

February 23, 2021

(Released Thursday, Feb. 25, 2021)

Valid 7 a.m. EST

<u>Summary</u>

The latest drought monitor indicates abnormally dry conditions, D0, across the outer perimeter of our county warning area, as well as moderate drought conditions, D1, across portions of the coast and the far western parts of Colorado and Washington counties.

Due to a lack of rainfall over the past 7 days and below average rainfall outlooks over the next month, drought conditions are expected to worsen across portions of the area.

Classification Information

D0 - Abnormally Dry: Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits, pastures or crops not fully recovered.

D1 - Moderate Drought: Some damage to crops, pastures. Streams, reservoirs, or wells low, some water shortages developing or imminent. Voluntary water-use restrictions requested.

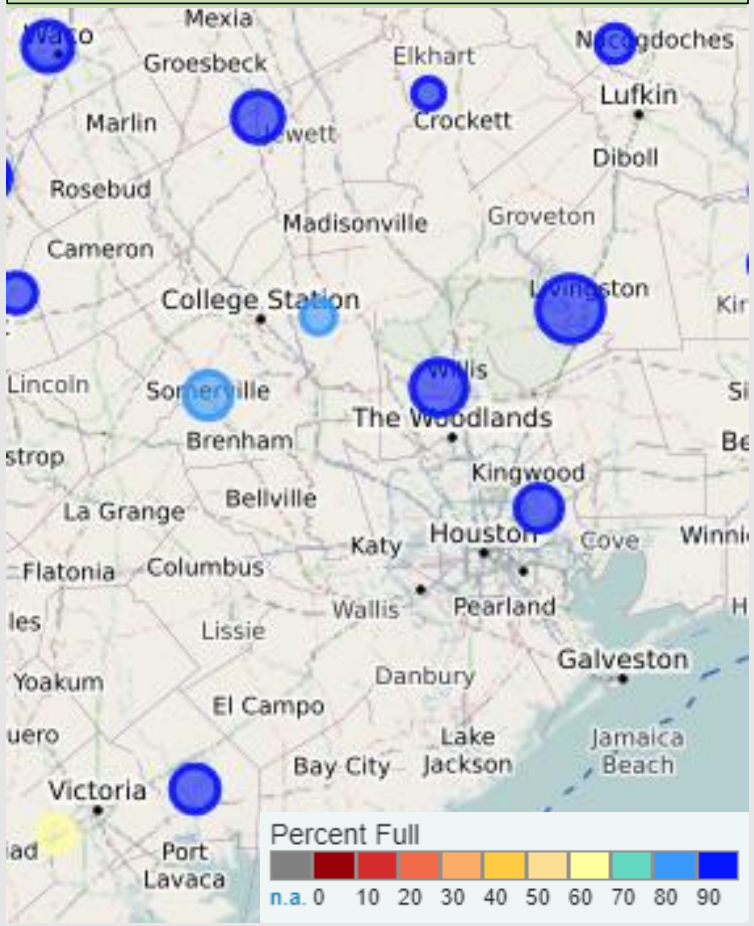
D2 - Severe Drought: Crop or pasture losses are likely. Water shortages are common. Water restrictions are imposed.

D3 - Severe Drought: Major crop/pasture losses. Widespread water shortages or restrictions

D4 - Exceptional Drought: Exceptional and widespread crop/pasture losses. Shortages of water in reservoirs, streams, and wells creating water emergencies.

Reservoir Status

Texas Reservoirs



Reservoir	Percent Full Conservation Storage
Houston County Lake	100%
Lake Livingston	100%
Lake Conroe	100%
Lake Houston	100%
Lake Somerville	86.5%
Lake Texana	97.2%

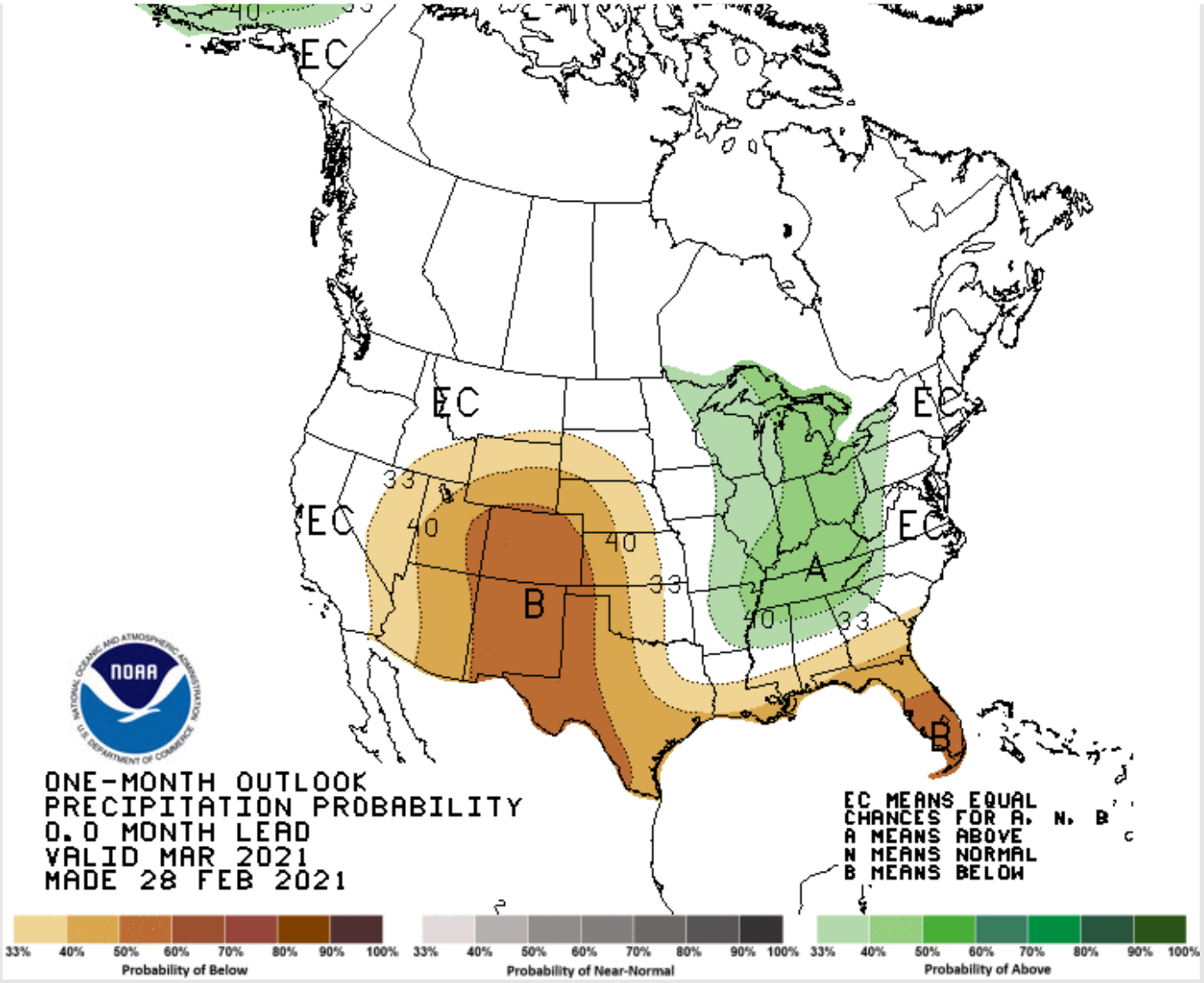
30-Day Precipitation Outlook

La Niña conditions are currently present; however, there is a 60% chance of a transition from La Niña to ENSO-Neutral during spring 2021 (April-June).

La Nina typically indicates warmer, drier conditions for the south, while ENSO-neutral indicates there is no definitive weather pattern occurring and/or expected (meaning impacts are variable).

CPC's seasonal outlooks combine the effects of long-term trends, soil moisture, ENSO, and other parameters.

As far as the next 30 days go, CPC is highlighting higher chances for below normal precipitation across southeast Texas.

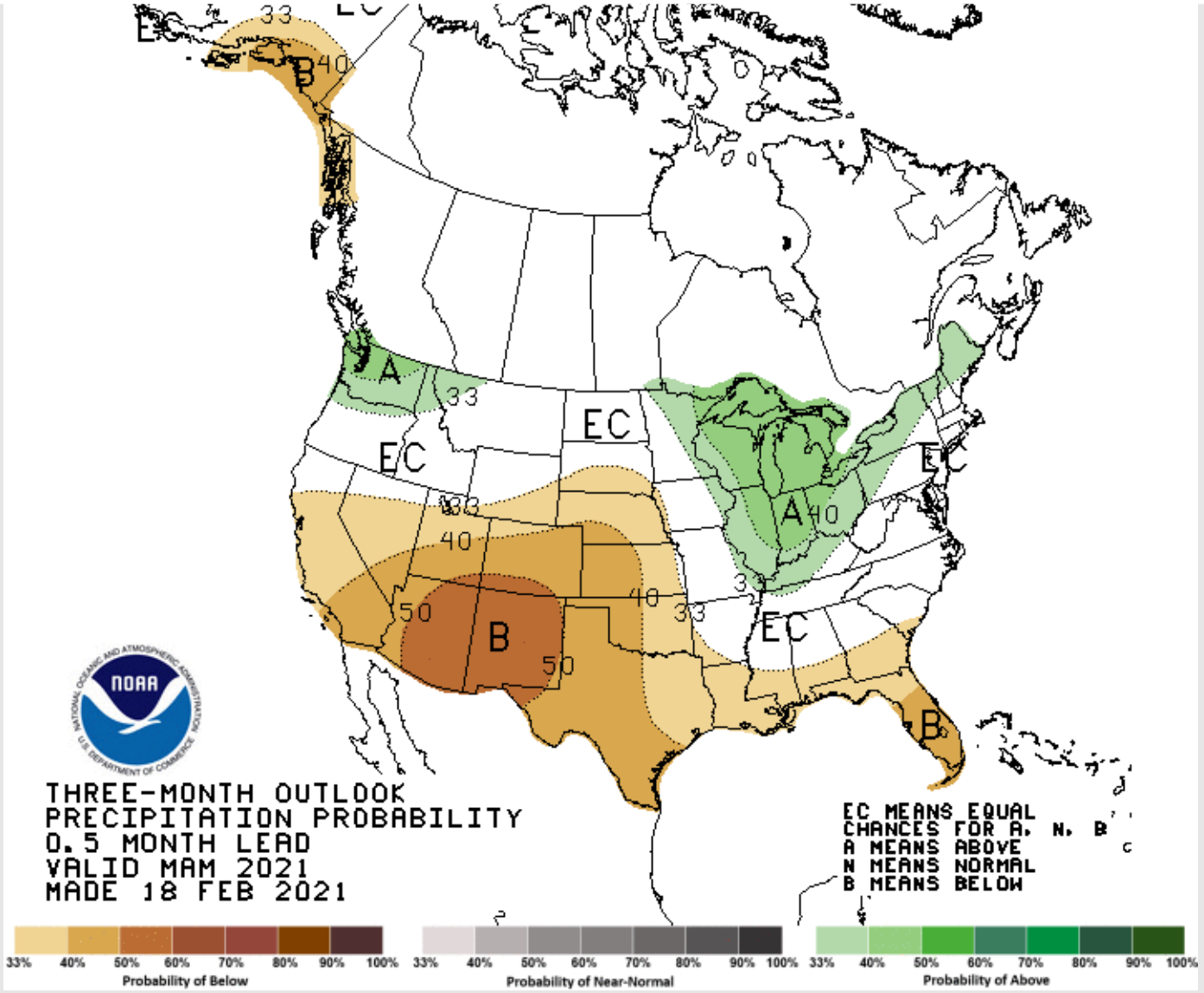


90-Day Precipitation Outlook

Similar to the 30-day precipitation outlook, CPC is also highlighting higher chances of below normal precipitation for March, April and May.

The good news is that CPC is not showing higher chances of above average rainfall to increase our spring flood potential; however, the higher chances for below normal precipitation means the potential for exacerbating current drought conditions.

Based on the Seasonal Drought Outlook issued by CPC on February 18th, CPC anticipates the western portion of our county warning area developing/maintaining drought conditions through the end of May 2021.



Summary

Considering the pre-existing conditions and the rainfall expected for the next 90 days, the NWS anticipates a near normal chance of flooding this spring along the Trinity, San Jacinto, Brazos, and San Bernard River Basins, and a below normal chance of flooding along the Colorado and Lavaca/Navidad River Basins.

Resources:

- *Precipitation Analysis: water.weather.gov/precip*
- *Streamflow Conditions: waterwatch.usgs.gov*
- *Reservoir Summaries: waterdatafortexas.org/reservoirs/statewide*
- *US Drought Monitor and Outlook: droughtmonitor.unl.edu*
- *Climate Graphics (Including ENSO Conditions, Precipitation Outlooks, and Soil Moisture): cpc.ncep.noaa.gov*

Questions?

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